

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-25 previously cancelled.

26. (New) A method of manufacturing an electrolytic capacitor comprising the steps:
forming a polymeric housing defining a chamber and having an opening providing access to the chamber;
stacking a plurality of flat conductive layers to generate a stack;
inserting the stack into the chamber;
extending an electrically conductive feedthrough from the stack to a position outside of the chamber by way of the opening; and
sealing the opening about the feedthrough.
27. (New) The method of claim 26 wherein the step of sealing includes thermally affixing together portions of the housing with the feedthrough trapped there between.
28. (New) The method of claim 26 wherein the step of forming the housing includes vacuum forming the housing.
29. (New) The method of claim 26 wherein the step of forming the housing includes heating a sheet of polymeric material, and conforming it to a tool.
30. (New) The method of claim 29 wherein the tool has a shape based on the shape of the stack.
31. (New) The method of claim 26 including providing a sleeve about the feedthrough, wherein the sleeve material is different from the conductive feedthrough material.
32. (New) The method of claim 31 wherein the sleeve has an elongated cross section.
33. (New) The method of claim 32 wherein the sleeve cross section terminates at acute vertexes, such that the housing material may readily seal about the sleeve without voids.
34. (New) The method of claim 31 wherein the sleeve is an elastomeric material.
35. (New) The method of claim 26 wherein the housing is formed of high density polyethylene.
36. (New) The method of claim 26 including inserting the stack into the housing by way of the opening.
37. (New) The method of claim 26 wherein the step of sealing comprises welding opposite sides of the housing together along a single line.

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38. (New) The method of claim 26 wherein the step of sealing includes generating and maintaining compression of the feedthrough to provide a fluid seal.
39. (New) The method of claim 26 wherein the step of sealing includes connecting a header to the housing to enclose the opening.
40. (New) The method of claim 39 including capturing the feedthrough between the housing and the header.
41. (New) The method of claim 26 including sealing a vent element into the opening.
42. (New) The method of claim 26 wherein sealing includes a first sealing operation in which an aperture to the chamber is maintained, and including the steps of filling the chamber with electrolyte by way of the aperture, and sealing the aperture.